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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/846,528	05/01/2001	Zhun Zhong	US 010218	4127

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EXAMINER

REKSTAD, ERICK J

ART UNIT	PAPER NUMBER
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2613

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DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/846,528

Applicant(s)

ZHONG ET AL.

Examiner

Erick Rekstad

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,8,11 and 12 is/are rejected.
- 7) ☒ Claim(s) 7,9 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3 and 4.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: Page 7 line 3 states "found not be" the sentence should state "found not to be". Page 12 second paragraph states "in Figure 9" the sentence should state "in Figure 10". Page 13 third paragraph states "in Figure 10" the sentence should state "in Figure 11".

Appropriate correction is required.

Claim Objections

Claim 10 is objected to because of the following informalities: The claim states a dependence on claim 8. The claim should depend on claim 9. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent 6,584,154 to Wu.

[claim 1]

Wu teaches a method for decoding interlaced video frames, the method comprising the steps of;

Down scaling a motion vector to produce a reduced resolution motion vector (Col 15 Lines 7-9, Col 13 Lines 16-53);

Detecting a moving area in an interlaced video reference frame (Col 15 Lines 9-14) Note the IDCT is the motion-compensated difference between pictures (Col 7 Lines 26-31);

Modifying the reduced resolution motion vector to produce a modified motion vector (Col 15 Lines 10-25); and

Retrieving pixel values from the interlaced video reference frame according to the modified motion vector (Col 15 Lines 26-65). (Col 12 Line 64-Col 16 Line 15, Figs. 8, 11-14).

[claim 2]

Wu further teaches modification of the motion vector so that pixels from each field are given an equal weight while performing an interpolation (Col 13 Lines 16-40). Note applicant states this modification is the rounding of non-integer motion vectors on page 7 lines 1-3.

[claims 3 and 4]

Wu teaches the method of claim 1, wherein the reduced resolution motion vector is modified so that the pixels values are retrieved in a correct field order. Wu further teaches the the vertical component of the reduced resolution motion vector is modified by changing an odd integer to a nearest even integer (Col 15 Lines 13-39).

Claims 1-3, 8 and 11-12 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent 6,310,919 to Florencio.

[claims 1, 11 and 12]

Florencio teaches a method for decoding interlaced video frames, the method comprising the steps of;

Down scaling a motion vector to produce a reduced resolution motion vector (Col 4 Lines 16-28);

Detecting a moving area in an interlaced video reference frame (Col 6 Lines 27-39);

Modifying the reduced resolution motion vector to produce a modified motion vector (Col 4 Lines 29-36); and

Retrieving pixel values from the interlaced video reference frame according to the modified motion vector (Col 6 Lines 40-52). (Col 3 Line 48-Col 4 Lines 52, Col 5 Line 64-60, Figs. 1, 2, 5A-B).

Florencio further teaches the storage of the method on computer program code embodied in tangible media, such as floppy diskettes, cd-roms, hard drives, or any other computer readable storage medium as required by claim 11 (Col 9 Lines 14-32).

Florencio teaches a decoder as required by claim 12 (Fig. 1).

[claim 2]

Florencio further teaches modification of the motion vector so that pixels from each field are given an equal weight while performing an interpolation (Col 8 Lines 7-15). Note applicant states this modification is the rounding of non-integer motion vectors on page 7 lines 1-3.

[claim 3]

Florencio further teaches modification of the motion vector so that the pixel values are retrieved in a correct field order (Col 4 Lines 36-52, Col 7 Line 51-Col 8 Line 6, Fig. 2).

[claim 8]

Florencio teaches the determining if frame motion compensation was performed on each macro block of a video sequence (Col 7 Lines 16-50, Fig. 2).

Claim Rejections - 35 USC § 103

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Florencio.

[claims 5 and 6]

Florencio teaches the truncation of the motion vector values to conform with the $\frac{1}{2}$ pixel resolution (Col 8 Lines 7-15). It is well known in the art that truncation is the dropping of all non-integer parts of a real number (Official Notice). It would have been obvious to one of ordinary skill in the art at the time of the invention that by truncating

the motion vector values to conform to $\frac{1}{2}$ pixel resolution, Florencio is changing $\frac{1}{4}$ and $\frac{3}{4}$ pixel positions to $\frac{1}{2}$ pixel positions.

Allowable Subject Matter

Claims 7, 9 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent 6,690,836 to Natarajan et al.

US Patent 6,184,935 to Iaquinto et al.

US Patent 5,635,985 to Boyce et al.

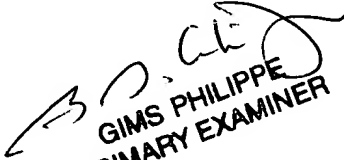
US Patent 6,148,033 to Pearlstein et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erick Rekstad whose telephone number is 703-305-5543. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 703-305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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